

What is claimed is:

1. A method of setting a communication environment between a mobile terminal and a smart card using a layered architecture of a protocol stack, the system comprising:

5 if the terminal provides power to the smart card, sending an answer-to-reset signal from the smart card to the mobile terminal;

determining whether or not the received answer-to-reset signal complies with an answer-to-reset signal pattern required by the mobile terminal;

10 if the received answer-to-reset signal complies with an answer-to-reset signal pattern required by the mobile terminal, analyzing the answer-to-reset signal transferred from the smart card to establish a communication environment very suitable for an application to be used at present;

if the optimum communication environment is established, sending a command for requesting to open a logical channel, which is to be used in the application, to the smart card;

15 opening the logical channel in response to the command for requesting to open the logical channel received from the mobile terminal, and sending a signal responding to the command to the mobile terminal; and

opening the logical channel to be used in the application to secure a communication channel between the smart card and the mobile terminal.

20 2. The method as claimed in claim 1, wherein the answer-to-reset signal transferred from the smart card comprises at least one of a communication speed and a communication protocol, which are supported by the smart card itself.

3. The method as claimed in claim 1, in the determining step, if the received answer-to-reset signal does not comply with an answer-to-reset signal pattern required by the mobile terminal, the method further comprising the steps of:

determining whether or not a process of a protocol and parameters selection is executed
5 in the mobile terminal;

if the mobile terminal executes the process of the protocol and parameters selection, sending a command for requesting to select the protocol and parameters to the smart card;

determining whether the process of the protocol and parameters selection is supported by the smart card, which receives the command for requesting to select the protocol and parameters
10 from the mobile terminal; and

if the smart card supports the protocol and parameters selection, sending a signal responding to the command for requesting to select the protocol and parameters to the mobile terminal to ensure the communication channel between the smart card and the mobile terminal.

15 4. The method as claimed in claim 1, wherein the smart card and the mobile terminal comprise a transmission layer for transmitting and receiving a data, and an application layer for processing the data, respectively.

5. The method as claimed in claim 4, wherein the application layer of the smart card and the
20 mobile terminal includes a plurality of applications, and the transmission layer of the smart card and the mobile terminal includes a plurality of communication environments capable of supporting the plurality of applications of the application layer.

6. The method as claimed in claim 4 or 5, wherein the transmission layer and the

application layer are independently embodied to each other, so that one application is supported by a plurality of communication protocols and one communication protocol supports a plurality of applications.

5 7. A storage medium for executing a method of setting a communication environment between a mobile terminal and a smart card using a layered architecture of a protocol stack, the storage medium capable of being read by a digital processor, and storing a program of commands executed by the digital processor, the program being implemented by types, with the program comprising the steps of:

10 if the terminal provides power to the smart card, sending an answer-to-reset signal from the smart card to the mobile terminal;

determining whether or not the received answer-to-reset signal complies with an answer-to-reset signal pattern required by the mobile terminal;

15 if the received answer-to-reset signal complies with an answer-to-reset signal pattern required by the mobile terminal, analyzing the answer-to-reset signal transferred from the smart card to establish a communication environment very suitable for an application to be used at present;

if the optimum communication environment is established, sending a command for requesting to open a logical channel, which is to be used in the application, to the smart card;

20 opening the logical channel in response to the command for requesting to open the logical channel received from the mobile terminal, and sending a signal responding to the command to the mobile terminal; and

opening the logical channel to be used in the application to ensure a communication channel between the smart card and the mobile terminal.